ENVIRONMENTAL
Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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The New Hampshire Well Inventory

A Program of the Department of Environmental Services, New Hampshire Geological Survey (NHGS).

HISTORY

The New Hampshire water well inventory was initiated in 1984 in conjunction with the passage of state statute RSA 482-B which requires the licensing of water well contractors and submission of well completion reports. At the same time a program of detailed investigation of glacial stratified-drift aquifers was being started. The development of a statewide natural resources data base with geographic references, computerized storage and retrieval was also being conceived. Since then these three programs have grown from the conceptual stage to the point where data are collected, stored, transmitted, and utilized by a variety of groups for mutually beneficial purposes. The well inventory has become a vital source of reliable basic data for many investigations of our state's water resources.

PURPOSE

The primary purpose of the well inventory is to increase the state's knowledge of its water resources. Since 90% of all rural residents obtain their water from bedrock wells, there is a need to know the suitability of the bedrock aquifer to meet that demand. Larger population centers seek water from higher capacity wells drilled into either stratified drift or bedrock. The current aquifer mapping program is evaluating the characteristics and capabilities of stratified-drift aquifers. The well inventory provides tremendous amounts of data to assist in this process and thereby facilitates more reliable evaluations of the sand and gravel aquifers. In areas that do not have stratified drift, water suppliers must rely on the bedrock. The initial phase of a new statewide comprehensive bedrock aquifer mapping effort was approved by the New Hampshire legislature. This new program will serve as a successor to the stratified-drift aquifer mapping program and will provide information on the potential yield and water quality of bedrock aquifers throughout the state. The well inventory identifies high yielding wells and indicates not only individual fractures but fracture trends and zones. At the same time, unfavorable hydrogeologic settings, areas of resistant and relatively unfractured bedrock where drilled wells are very costly and unproductive, are being identified.

Additional benefits are realized by those engaged in the hydrologic, geologic and engineering consulting business as well as by those Bureaus within the Department of Environmental Services involved with site evaluations for water supply development and/or groundwater quality assessment and protection.

Finally, the well drilling industry and consumer benefit from the identification of problem drilling areas. This identification affords the opportunity to better estimate the cost and productivity of wells in a given area.

APPROACH

From the beginning, the well inventory has been conceived in a manner that will provide quick and easy access to thousands of records upon request. The recognized pitfalls of longstanding programs in other states have been avoided through full utilization of computers in several capacities to achieve data retrieval commensurate with the information age. Reliability of the data is a primary concern that has necessitated a thorough checking process and field verification.

PROGRESS

DES collects thousands of well reports per year. The data base contains more than 70,000 records. Through intensive field work DES has accurately located and determined coordinate values for approximately one third of these wells. Statewide Global Positioning Satellite (GPS) technology was implemented in the location of wells in 1995. Well records are transferred both to the state's GRANIT data base and the federal GWSI data base to assist others in their water resources investigations.

Our staff has received support and invaluable assistance from local communities and local government employees throughout the state including town clerks, administrative assistants, local health and building code enforcement officials and selectmen. Their efforts have contributed greatly to the quality and success of the program.

PUBLIC ACCESS TO DATA

Water well data summaries are available upon request in several formats. Cost of a standard hard copy report of 100 lines or less is $10.00. An additional $0.10 is charged for every line over the first 100. Data are also available in a digital file format. Requests for data must be in writing.

A report which summarizes median well depths and yields by town, entitled "Bedrock Water Wells in New Hampshire: A Statistical Summary of the 1984-1990 Inventory", is available for a $5.00 fee upon request. It is anticipated that this report will be revised on a 5-year interval.

For more information contact the New Hampshire Geological Survey, PO Box 95, 29 Hazen Drive, Concord, NH 03301-0095 (603) 271-1973 or (603) 271-4087.